

# RATE CONTROLLING METHOD AND APPARATUS FOR USE IN A TRANSCODER

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## Abstract

A rate controlling method for computing a reference quantization parameter is provided, for use in a transcoder having a variable length decoder, an inverse quantizer, a quantizer and a variable length encoder. The rate  
10 controlling method comprising: receiving an input quantization parameter and motion information for each of the macroblocks from the variable length decoder; analyzing the similarity of motion information between a current macroblock and its neighboring macroblocks to compute a scaling factor for the current macroblock when allocated within P- and B-pictures; computing a bit  
15 difference between a target outputting bit stream and a real outputting bit stream; estimating the fullness of a virtual buffer to encode the current macroblock in view of the scaling factor; and computing the reference parameter based on a target bit rate, the first quantization parameter and the bit difference.